

Remarks

Amendments to the Drawings

The attached sheets of drawings show the following amendments:

1. In Figure 1, on the first sheet, reference number 19 has been added;
2. In Figure 3, on the second sheet, reference number 72 has been added and reference number 26 has been changed to 110
3. In Figure 7, on the third sheet, reference number 112 has been changed to 212.

A. Introduction

Claims 1-30 have been presented for examination.

Claims 1-10 have been elected without traverse in a previous response.

Claims 11-20 have been restricted in a previous response.

Claim 8 has been cancelled in a previous response.

Claims 1-10 and 21-30 have been rejected under 35 U.S.C. §112.

Claims 1-3, 5, 6, 9, 21-27 and 29 have been rejected under 35 U.S.C. §102(b).

Claims 7, 10, 28 and 30 have been rejected under 35 U.S.C. §103(a).

Claims 2 and 24 have been objected to for informalities.

The drawings have been objected to for failing to comply with 37 C.F.R. §1.84(p)(4) and (5).

Claims 1, 2, 3, 9, 10, 21, 22, 23, 25, 28, 29 and 30 have been amended:

Claim 4 has been cancelled.

With regard to claims 1-3, 5-7, 9-10 and 21-30, reexamination and reconsideration is requested based on the amendments to the claims and on the remarks as more fully set forth below.

Specification has been objected to.

B. Interview Summary

On August 29, 2006, the undersigned had an interview the examiner. In this interview, the various objections and rejections to the drawings, specification and claims were discussed. The undersigned indicated to the examiner that the objections to the drawings and the specifications and the rejections of the claims based on 35 U.S.C. §112 were being addressed and overcome. The undersigned and the examiner specifically discussed the language of the phrase

“the axis of the pulley” in Claims 22 and 24, which forms the basis of one of the examiner’s objections. It was agreed that the language would be amended to read “said pulley’s axis” and such language would overcome the objection.

The undersigned and the examiner further discussed the examiner’s rejections of claims 1 and 21 under 35 U.S.C. §102(b) as being anticipated by Roberts et al. and under 35 U.S.C. §103(a) as being unpatentable over Roberts et al. in view of Iwanaga et al. The undersigned and the examiner further discussed the Juan, Hartman, and Adams references as they pertained to claims 1 and 21. The undersigned and the examiner agreed none of the references disclosed a manual brake actuator which provided a variable and incrementally locking braking force. It was discussed with the examiner that one of the ideas behind the invention was to have a manual brake actuator which could lock in different braking positions and allow a wheelchair user to release the manual brake actuator at the different lock braking positions and still have a braking force applied to the caliper brakes. This would allow the wheelchair user use of both hands on the wheelchair wheels for steering purposes. During the interview, the undersigned and the examiner both reviewed the prior art references and it was agreed that none of the references disclosed a manual break actuator which could be locked at different braking positions.

Finally, the undersigned and examiner discussed the use of the word “type” throughout the claims in the phrase “caliper type brakes”. The examiner felt that the use of the word “type” in this phrase made the phrase too broad and made it readable on the prior art because it was unclear what the applicant considered as a type of caliper brake. It was agreed that the Applicant would remove the word “type” from the phrase where it appears in the claims.

C. Objections to the Drawings

Each of the objections to the drawings has been addressed with amendments to the

drawings or the specification as follows:

1. The designation number of the upper lip of the recessed edge in Figure 7 has been changed to 212;
2. Reference number 19, cited in page 10 of the description, has been added to Figure 1;
3. Reference number 72, cited in page 11 of the description, has been added to Figure 3;
4. In Figure 3, reference number 26 has been changed to reference number 110 to designate the cable wire; and
5. The specification on page 24 has been amended to cite reference number 116 instead of 216.

The replacement sheets with the amendments to the drawings are attached to this Response. With these amendments it is believed that the drawings are now in a condition for acceptance.

D. Objections to the Specification

The Examiner objected to the phrase “and upper lip” on page 22, line 15, of the specification and suggested that it be changed to “an upper lip.” Applicant has considered the Examiner’s objections and amended the specification accordingly. Moreover, claims 21-30 read upon the elected invention.

E. Claim Rejections Under 35 U.S.C. § 112

The Examiner rejected claims 1-10 on the basis that the specification does not reasonably provide enablement for “a braking cable connected from the caliper brakes of the manual brake actuator,” as recited in claim 1. Accordingly, the Applicant has amended claim 1 to recite “a braking cable 112 connected from the caliper brakes 18 to the manual brake actuator 142” as

suggested by the Examiner.

The Examiner has also rejected claims 1-10 and 21-30 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner identified the following basis for the rejection of the following claims:

1. The word “type” used throughout the claims was considered indefinite;
2. Regarding claims 9, 10, 29 and 30, the phrase “said lever arm” lacked antecedent basis;
3. Regarding claim 10, the phrase “said adjustable locking means” and “said mounting bracket” lacked antecedent basis;
4. Regarding claim 28, the term “said frame” lacked antecedent basis; and
5. Regarding claim 29, the term “said locking force” lacked antecedent basis.

With regard to the term “type” used throughout the claims, in each case, the word was used in the phrase “caliper type brakes.” The Applicant respectfully disagrees with the Examiner that the use of the word “type” in this phrase is indefinite. Nevertheless, the Applicant has amended each claim that included the phrase “caliper type brakes” to read “caliper brakes.”

In claims 9, 10, 29 and 30, the Applicant has made amendments to cure the lack of antecedent basis. In claims 9 and 10, the Applicant has deleted the term “arm” and amended claim 9 so that it now depends from claim 5 and claim 10 so that it now depends from claim 7 which ultimately depends from claim 5. Claim 5 provides the proper antecedent basis for the phrase “said lever.” With regard to claim 29, the phrase “said lever arm” has been deleted from the claim. In addition, claim 29 has been amended to depend from claim 26. As a result, claim 30, which depends from claim 29, also depends from claim 26 and claim 26 provides the proper

antecedent basis for the phrase “said lever.”

With regard to the phrases “said adjustable locking means” and “said mounting bracket” in claim 10, the claim has been amended to depend from claim 7 which provides the proper antecedent basis for the phrase “said mounting bracket.” Further, the phrase “said adjustable locking means” has been deleted from claim 10.

With regard to claim 28, the term “said frame” has been amended to read “said wheelchair.” The phrase “said wheelchair” does not lack an antecedent basis.

With regard to claim 29, the phrase “said locking force” has been deleted from the claim.

With these amendments each of the examiner’s rejections based upon 35 U.S.C. §112 have been addressed and overcome.

F. Claim Rejections Under 35 U.S.C. § 102(b)

The Examiner rejected claims 1-3, 5, 6, 9, 21-27 and 29 under 35 U.S.C. § 102(b) as being anticipated by Roberts, et al, U.S. Patent No. 5,799,756. According to the Examiner, the Roberts’ reference disclosed all of the elements of these claims including providing an incremental and variable braking force to the brakes as broadly claimed via a latch and a plurality of notches.

A claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. Union Oil Co. of California*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987); Manual of Patent Examining Procedures (MPEP) § 2131.

As discussed in the interview with the Examiner on August 29, 2006, it is the Applicant’s position that Roberts discloses neither a variable nor incremental braking force. Instead, Roberts discloses a latch which engages a splined disk to lock the wheel. Thus, the braking mechanism

in Roberts provides only a single locking braking force. Thus, it is neither variable nor incremental. Nevertheless, in order to further clarify the Applicant's invention and further distinguish it over Roberts, the Applicant has agreed to and has amended claim 1 to disclose that the manual brake actuator can lock at different braking positions to provide a variable and incremental braking force to the caliper brakes. Specifically, claim 1 has been amended to include the limitation "said manual brake actuator being lockable at a plurality of braking positions to provide a variable and incremental braking force." Having the manual brake actuator lock at different braking positions allows the wheelchair user to release the manual brake actuator and still have a braking force applied to the wheelchair wheels. This allows the user the use of his hands on the wheels of the wheelchair for steering purposes.

It is clear that Roberts does not allow for manual brake actuator that can be locked at a plurality of braking positions. Consequently, the Roberts' reference does not teach every aspect of the claim invention in claim 1 as amended and claim 1 patentably distinguishes over Roberts and is in a condition for allowance. In addition, claims 2, 3, 5, 6, 7 and 10, which depend from claim 1, also patentably distinguishes over Roberts and are in a condition for allowance.

Independent claim 21 has also been amended with this Response. This claim now includes the limitation that "said manual braking actuator being lockable in a plurality of braking positions." As discussed above, neither Roberts nor any of the other prior art references identified disclose a manual brake actuator which can be locked in different braking positions. This limitation clearly distinguishes over the prior art and puts claim 21 in a condition for allowance. In addition, claims 22-30, which depend from claim 21, are also in a condition for allowance.

G. Claim Rejections Under 35 U.S.C. § 103(a)

The examiner rejected claims 7, 10, 28 and 30 as being unpatentable over Roberts et al., ('756) in view of Iwanaga et al. ('609). The examiner was of the opinion that Roberts disclosed each of the elements of these claims but failed to disclose a plurality of notches radially spaced around a pivot point of a lever arm of the brake actuator with a plunger mountable to the mounting bracket and failed to show the lever having a mounting element being slid within a guiding slot on the lever. The examiner opined that Iwanaga disclosed these missing elements.

To sustain a rejection under 35 U.S.C. § 103(a), the examiner bears the initial burden of establishing a *prima facie* case of obviousness. To establish *prima facie* obviousness, all of the claimed limitations must be taught or suggested by the prior art. MPEP § 2.143.03. Moreover, there must be some suggestion or motivation to modify the reference or to combine the reference teachings and that suggestion or motivation “must...be found in the prior art, not in the applicant’s disclosure.” See MPEP §2.143 (citing *In Re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991)). The Federal Circuit has held that although a prior art reference “may be capable of being modified to run the way an apparatus is claimed,” “there must be a suggestion or motivation in the reference to do so.” MPEP §2.143.01 (citing *In Re Mills*, 916 F.2d 680 (Fed. Cir. 1990)). In *In Re Dembicsak*, the Federal Circuit reiterated that the law requires a “rigorous application of the requirement for the showing of a teaching or motivation to combine prior art references” as an answer to “the subtle or powerful attraction of hindsight-based obviousness analysis.” *In Re Dembicsak*, 175 F.3d 994, 999 (Fed. Cir. 1999)). “That is, showing must be clear and particular.” *Id.*

The combination of the Roberts and Iwanaga does not teach or suggest all of the claim limitations in claims 1 or 21. Moreover, neither Roberts nor Iwanaga teach or suggest any

motivation to combine the prior art references.

Both the Roberts and Iwanaga references disclose parking brakes which prevent wheels of the respective vehicles from moving at all. The Iwanaga reference does not disclose a variable or incremental braking force. Like the Roberts reference, Iwanaga provides for only a single locking braking force. Thus, as discussed above, the combination of Roberts and Iwanaga does not disclose a manual brake actuator which is lockable at a plurality of braking positions to provide a variable and incremental braking force. Consequently, the combination of the references does not teach every aspect of the claimed invention in claim 1 or 21 and the examiner has failed to show a *prima facie* case of obviousness.


Neither Roberts nor Iwanaga provide any suggestion or motivation to combine the referenced teachings. The Iwanaga reference indicates that it is “adapted to be used in an industrial vehicle such as a forklift or the like” (Iwanaga, et al Col. 1, Lines 7-9). There is no suggestion that the toggle-type parking brake disclosed in Iwanaga is adaptable and practical for use with a wheelchair. In this regard, it is also the applicant’s position that the Iwanaga reference is not an analogous prior art. It is a parking brake for an industrial vehicle, as opposed to a mechanism for providing a variable braking force to a wheelchair. For these additional reasons, the examiner has failed to show a *prima facie* case of obviousness.

CONCLUSION

In view of the above, applicants submit that claims 1-3, 5-7, 9-10, and 21-30 are now in a condition for allowance. Applicants respectfully request reconsideration and withdrawal of the objections to the specification and the rejection of the claims cited in the Office Action. Allowance of claims 1-3, 5-7, 9-10, and 21-30 at an early date is solicited. If the examiner still finds impediments to the allowance of the claims 1-3, 5-7, 9-10, and 21-30 and in the opinion of the examiner, a telephone conference between the undersigned and the examiner would help remove such impediments, the undersigned respectfully requests such a telephone conference.

Respectfully submitted,

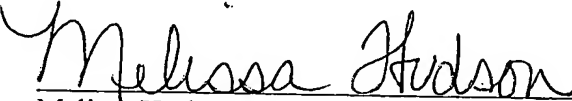
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